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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/676,116	10/02/2003	Seong Woon Kim	123056-05004412	6033

43569 7590 03/19/2007

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EXAMINER	
STIGLIC, RYAN M	

ART UNIT	PAPER NUMBER
2111	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/19/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/676,116	KIM ET AL.	
	Examiner	Art Unit	
	Ryan M. Stiglic	2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 January 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1 and 3-9 are pending and have been examined.

2. Claims 1 and 3-9 are rejected.

Response to Arguments

3. Applicant's arguments filed January 17, 2007 have been fully considered but they are not persuasive. The Examiner respectfully disagrees that Philbrick does not disclose peripheral memory controller as required by independent claim 1. Philbrick discloses DMA controller (Fig. 1, 68) responsible for storing and outputting transmitted data between a network (Fig. 1, 24/25) and a disc storage (Fig. 1, 70) as described in paragraph [0052] ("Upon matching the packet summary with the CCB, assuming no exception conditions exist, the data of the packet, without network or transport layer headers, is sent by direct memory access (DMA) unit 68 to the destination in file cache 80 or file cache 24 denoted by the CCB."). As such, applicant's arguments are not persuasive and the grounds of rejection from the Office Action dated September 18, 2006 are maintained are provided below.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 3-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Philbrick et al. (US20010037406A1).

For claim 1, Philbrick discloses:

A network-storage apparatus (Fig. 1, 'INIC' 22; paragraph [0042]) for high-speed streaming data transmission through a network, the apparatus comprising:

- an internal peripheral device bus separated from a peripheral device bus outside the network-storage apparatus, for transmitting data between devices inside the network-storage apparatus (Fig. 1, 48; [0043]);
- a peripheral device bus bridge for transferring bus transaction from a host processor to the internal peripheral device bus and transferring bus transaction for a host processor executing inside the network-storage apparatus or a main memory to a bus bridge (Fig. 1, 50; [0043]);
- a disk controller for controlling a plurality of disc storage connected to the network-storage apparatus and managing reading and writing data from and to the disc storage (Fig. 1, 72; [0045]);
- a peripheral memory for storing transmitted data between the disc storage and the network (Fig. 1, 46; [0043]);
- a peripheral memory controller for controlling the peripheral memory and storing or outputting the transmitted data between the disc storage and the network ([0053]; and
- a TOE for reading data to be transmitted to the network from the peripheral memory, constructing the data in the form of a packet including information for network

transmission ([0089] discloses a situation where a client on the network requests data stored in a peripheral memory of the server and the INIC gathers the information and sends the data packets to the client with prepended headers "it created based on the server CCB"), transmitting the packet to the network, and storing the data received from the network in the peripheral memory through the peripheral memory controller (Fig. 1, items 52,58,60; [0043-0062]);

- wherein the network storage apparatus stores the streaming data received through network on the disk storage in the form of zero copy and transmits the streaming data stored on the disk through the network in the form of zero copy, between the plurality of disk storage of an internet server computer system and a network (see section 4 from the Office Action dated September 18, 2006; also see Philbrick [0045, 0053, 0011-0013, 0087-0089]), wherein the peripheral device bus is a PCI bus and the peripheral device bus bridge roles a PCI bridge ([0066]).

For claim 3, Philbrick discloses:

The apparatus of claim 1, wherein the disk controller is connected to a plurality of disc storages in parallel through a disk interface bus and accesses to the data in a pipeline manner ([0111-0113]).

For claim 4, Philbrick discloses:

The apparatus of claim 1, wherein the disk controller reads and writes data from and to a plurality of disc storages in a stripping manner ([0044-0045] Where stripping is a form of RAID clearly covered by the scope of the word RAID).

For claim 5, Philbrick discloses:

The apparatus of claim 1, wherein the peripheral memory controller constructs a memory table so as to cache data transmitted from and to the network ([0045-0046,0055,0059-0060,0110] etc.).

For claim 6, Philbrick discloses:

The apparatus of claim 1, wherein the peripheral memory controller is provided a register for indicating size of the peripheral memory inside the peripheral memory controller, and transmits a great deal of data in a DMA manner ([0110,0052-0053]).

For claim 7, Philbrick discloses:

The apparatus of claim 1, wherein the peripheral memory controller deletes contents of a memory table thereof when finishing accessing to the peripheral memory ([0045-0046,0055,0059-0060,0110]).

For claim 8, Philbrick discloses:

The apparatus of claim 1, wherein the TOE creates a DSB table having information on packet data to be transferred to the disk immediately among data packets received from the network,

transmitting a data packet to the peripheral memory to store the data packet if the data packet storable in the disk has information matching DSB, and transmitting a data packet to a general network stack otherwise ([0043-0062]).

For claim 9, Philbrick discloses:

The apparatus of claim 1, wherein the TOE reads data to be transmitted to the network from the peripheral memory, constructs the data in the form of a packet and transfers the data packet to the network when the data to be transmitted is stored in the peripheral memory and the TOE receives a data transmission instruction from a host processor ([0043-0062]).

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan M. Stiglic whose telephone number is 571.272.3641. The examiner can normally be reached on Monday - Friday (6:00-3:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached on 571.272.3632. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RMS

PAUL R. MYERS
PRIMARY EXAMINER